



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,764	02/15/2001	R. Stephen Mulder	7661-000007	2346
27572	7590	06/29/2004	EXAMINER	
HARNES, DICKEY & PIERCE, P.L.C.			NGUYEN, TU T	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			2877	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/784,764	Applicant(s) MULDER, R. STEPHEN	
	Examiner Tu T. Nguyen	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-13, 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 14, "filtering out noise and light" is not clear. It is not clear how a lock-in amplifier can filter out light.

Claims 2-7 are rejected as being depended on a rejected claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Egan et al (4,097,751) in view of Montagnino (4,022,532).

With respect to claim 17, Egan discloses a system for measuring a retroreflectance. The system comprises: a light source 14 (fig 1), a light modulating device 18 (fig 1) for generating a reference signal and a measuring signal (column 6, lines 34-41), a detector 24 (fig 1) for processing a reflected signal and the reference

signal; a sensor for producing an output signal in response to the reflected signal (column 6, lines 25-30).

Egan does not disclose a lens for reflecting the measuring signal onto a part and back through the lens. Montagnino discloses a system for monitoring an optical figure. The system comprises: a lens 22 (fig 1) for reflecting the measuring signal onto the part 21 (fig 1) and back through the lens. It would have been obvious to modify Egan with Montagnino's lens to make the system more efficiency.

Egan does not disclose an amplifier. The claimed limitations would have been known. It would have been obvious to modify Egan with the known limitations to facilitate the measuring.

Egan does not explicitly disclose determining the frequency of the reference signal. It would have been obvious to modify Egan's sensor 24 (fig 1) to detect the frequency of the reference signal to process the reference signal easier.

With respect to claim 19, the claimed electronically modulated laser diode would have been known. It would have been obvious to modify Egan with the known electronically modulated laser diode to reduce the system component.

With respect to claims 18,20, it would have been obvious a design to modify Egan's method to test a plurality parts without changing the setup to save the testing time. Further, it would have been obvious to modify Egan with a known filter for filtering out excess noise to use the system in different environments.

Allowable Subject Matter

Claims 9-13,15-16 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: prior arts of record do not disclose a portable reflex comparator. The system comprises: a focal plane offset from a light modulating device; a collimating lens positioned parallel to the focal plane, wherein the collimating lens is operable to receive a diverging beam of light from the focal plane, direct said beam of light substantially normal to the surface of a reflex part, receive the light beam back from the reflex part and converge the light beam to the focal plane; a lock-in amplifier disposed in optical communication with said collimating lens for filtering out external noise which structurally arranged and functionally operated as claimed in claims 9,15.

Claims 1-7 would be allowable for the same reason as discussed above if Applicant amend the claim to overcome the 112 rejection above.

Response to Arguments

Applicant's arguments filed on 04/09/2004 have been fully considered but they are not persuasive. Applicant amended the claims so it is necessitated to make this action final.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

06/26/2004